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advantages of redesign

Redesigned CSCC math lab is success

Special to the Banner

Cleveland State Associate Professor of Mathematics John Squires was recently featured as the keynote speaker at the faculty awards luncheon at the Florida Community College of Jacksonville. Squires was asked to speak about the new redesigned mathematics lab at CSCC.

Cleveland State's Math Department recently received a grant from the Tennessee Board of Regents to redesign the developmental studies program. CSCC was one of six schools out of 28 that submitted proposals that received the grant.

The Developmental Studies Program Redesign Grant enabled the Math faculty to redesign courses and to set up a mathematics lab with a 1+2 format, one hour class meeting each week and two hours of lab work, instead of the typical three hour class meeting format.

Each course consists of 10 modules and a final exam that is entirely online. Students complete one module each week, although they may work ahead if they choose.

The software is required, but textbooks are optional. Courses are designed with a 10-15 minute video lecture over each section in a module with approximately 2-3 sections per module. After the video lecture, students will complete homework over each section.

Once that is completed, students will take a quiz. They will repeat that process for each section

"The lectures that were developed for this software were developed by us as we would teach it to them, and one of the benefits is that they can watch the lectures as many times as they would like," stated Associate Professor of Mathematics John Squires. "As long as students are willing to put in the time, they are going to do well."

Squires stated there are many advantages with the new redesign program, including increased section offerings, smaller class sizes and greater scheduling flexibility. Students will also receive instant feedback of their performance in the class and are able to be more engaged in their learning.

Dr. Jerry Faulkner, vice president for academic affairs at CSCC, said, "An outstanding feature of this methodology is that a student can work at his or her own pace instead of being held back or left behind by the pace of the whole class. The goal of each module is mastery, not just a minimum passing grade."

Squires has been extremely impressed by results of the new lab.

"There were two students who completed three courses in one semester, Katie Hines and Tamara Upchurch. Katie completed elementary algebra, intermediate algebra and college algebra. This consisted of over 1,500 problems, 32 homework sets and 38 quizzes in one semester," he said.

"Tamara completed basic math, elementary algebra and intermediate algebra which consisted of 2,000 problems, 32 homework sets and 38 quizzes. We're really proud of these students and the amazing amount of work they did in order to accomplish this."

Hines said, "I like that I can do this on my own schedule. I wish they had this when I was in high school!"

Upchurch said, "I like that you don't have to wait for results. You have instant feedback, so you know how you did on your work. The instructors have been wonderful, too. They are there for support and are more than willing to

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MATH LAB REDESIGNED — Cleveland State students Katie Hines and Tamara Upchurch completed three math courses in one semester. From left are David Guardiani, associate professor of mathematics; Hines, Upchurch; and John Squires, associate professor of mathematics.

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success rate

help you if you have a problem."

"I'm being contacted by some of the largest community colleges in the nation who have heard of the success of this program," said Squires.

According to Squires, there were 46 students who completed multiple courses in one semester; 37 students completed two or more developmental math classes. Of those, 33 of them exited the developmental math program by completing intermediate algebra and four of them completed basic math and elementary algebra. Nine students completed a developmental math class and a college level math class.

These students were able to exit the developmental math program and complete a college level math class in the same semester, putting them one step closer to completing their degree program.

"Due to the redesign, the number of students that exited the developmental math program this fall shot up by an amazing 47 percent over previous fall semesters," stated Squires. "Intermediate algebra had a 79 percent success rate."

Squires said CSCC received an additional grant from TBR to expand the redesign program. By next fall, 95 percent of math classes will be done in this format.